

## Attention Service Executives: M2M Can Make You Smarter

*M2M Comes of Age with the Emergence of “Smart Services”*

**A**sk the vice president of service at a major manufacturing company what “M2M” means to him/her, and you’re not likely to get a definitive answer.

They may have heard of the pervasive Internet, which is one way of classifying M2M. It also means Machine-to-Machine, Man-to-Machine and Machine-to-Mobile. But nowhere in these technology-centric monikers is a mention of business value.

The fact is, M2M is a revolutionary technology that is now enabling an evolutionary solution, known as “Smart Services.”

### M2M: The Revolution

Fundamentally, M2M allows physical assets to transmit detailed usage and performance data over the Internet, utilizing on-board monitoring units and communication devices. Early applications of M2M – including many in production today – often fulfilled their rudimentary purpose, but were constrained by such limitations as:

- “Black-box” hardware components with limited to no ability to conduct over-the-air programming (OTAP)
- Spotty communications infrastructure (e.g. telephone service, wireline Ethernet, etc.)
- Inflexible data- and user-interfaces (i.e. no Web services capability)

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Rapid evolution in Internet protocols and communication infrastructure has not only lowered the cost of networking assets, but improved data security, quality and rate of data transfer. Furthermore, hardware and applications have matured and evolved beyond the first generation offerings. Hardware device manufacturers are now offering low power, adaptable devices which can link multiple assets via numerous communications channels. In addition, solution providers are offering

hosted solutions with flexible web interfaces, allowing companies to leverage such applications without systems integration impediments.

## Smart Services: The Evolution

The most critical phase in the maturation of any technology is the emergence of a demonstrable and repeatable business case for mainstream adoption. Smart Services embodies this business case for M2M.

At their core, Smart Services are differentiated post-sales product support capabilities, enabled by wirelessly capturing and analyzing real-time product performance information, and usually delivered by manufacturers or service providers to the owners/operators of the serviceable equipment or machinery. Leveraging on-board sensing and control devices and wireless Internet connectivity, Smart Services solutions allow manufacturers to remotely capture and analyze asset performance data, identify root causes of failure and trigger corrective workflows including repairs, upgrades, and technician and part dispatch. These solutions are deployed enterprise-wide, so that service and support professionals can proactively manage and optimize entire installed bases of assets at multiple customer locations.

**ABB Robotics** – the \$1.3-billion operating unit of the industrial manufacturing giant – has leveraged a Smart Services solution to roll out its ABB Remote Monitoring (ARM) service to its customers in automotive, general industry, and other markets. On the one hand, the company saw



an opportunity to dramatically reduce robot downtime and to provide service more cost-effectively, by eliminating on-site troubleshooting and coordinating spare part and field technician dispatch. In fact, ABB saw an immediate 70% reduction in asset downtime. But more importantly, these service delivery performance upticks have dramatically impacted ABB's customers' performance. One customer saved more than \$100,000 in robot programming time and production throughput on a single robot outage, due to ABB's ability to respond.

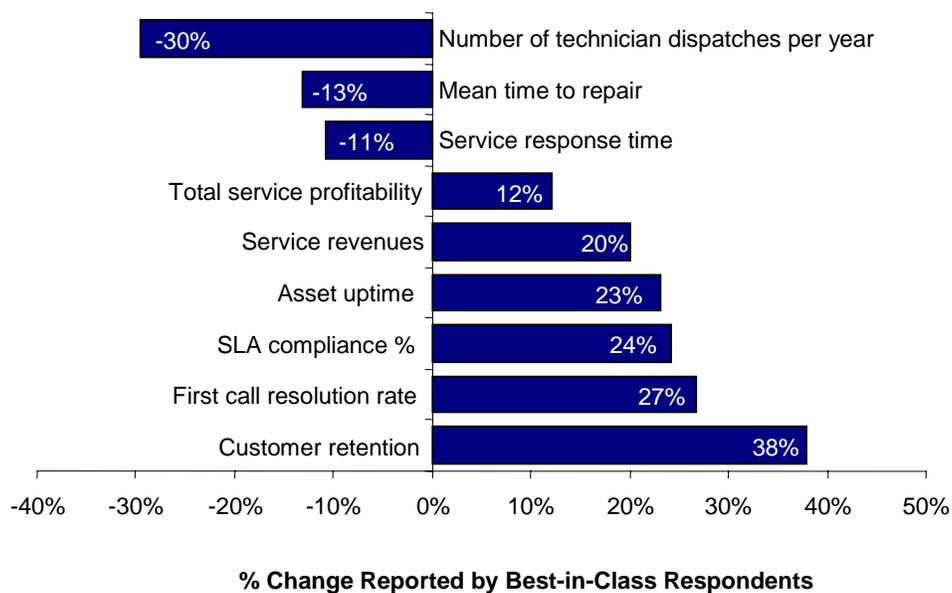
Tangible business results like this are increasingly evident across multiple industries, including medical devices, industrial machinery, food equipment, and distributed energy. Wireless Data Research Group estimates the market for Smart Services — including hardware, software, and services — to reach \$28 billion in 2007. And worldwide device-related revenue streams are expected to reach upwards of \$200 billion by 2010, according to other industry studies. But by no means is Smart Services a mature solution category. In fact, most of today's deployments still utilize “hard-line” network connections via Ethernet or even telephone lines.

One could compare the lifecycle stage that Smart Services is at today to where the Internet was in the early 1990's. At that time, knowledge of the Internet was growing, but very few executives fully grasped how Internet-enabling their business would change it. In the ensuing span of about fifteen years, companies like Google and eBay have ascended to dominant blue-chip status, and countless smaller businesses have fundamentally changed the way they conduct business and interact with their customers.

## Smart Services Justified

Smart Services is uniquely poised to transform the product value chain just as monumentally and irrevocably as the Internet did to commerce. The reason: a “perfect economic storm” is occurring today in aftermarket product service, fueled on the demand side by asset owner/operators requiring unprecedented levels of asset uptime, reliability, availability, and output; and on the supply side by manufacturers facing increasing commoditization and competition on the product side of their businesses.

**Figure 1: Impact of Smart Services Solutions on Customers and Operations**



Source: [AberdeenGroup](#)

The result: best-in-class OEMs like ABB, Kodak, Gardner Denver, Siemens, and countless others are looking beyond product-based sales alone for differentiation, profit margin, and growth. To compete, leading product companies are developing new revenue streams derived from post-sales service offerings, and are strengthening their brand image based on customer service and satisfaction. OEMs that manufacture everything from jet engines to photocopiers are thinking more strategically about product quality and performance over the entire product lifecycle. In fact, an OEM’s capability to offer lifecycle service contracts, predictive and preemptive maintenance, and premium service levels can make the difference between a customer-for-life and a lost deal.

This climate is ripe for the entrance and instantiation of Smart Services, as evidenced by the dramatic performance upticks exhibited by early adopters (Figure 1). With Smart Services solutions in place, service organizations are not only realizing significant improvement in asset uptime, but are

also reducing unplanned, on-site service calls resulting in higher technician productivity, service profitability and improved customer satisfaction and retention.

In the case of **Gardner Denver** – the \$1.7-billion industrial equipment manufacturer – a Smart Services solution in their air compressor product line has provided a new opportunity to improve product design and quality. The company captures compressor performance data in real-time via a wireless Internet connection, and feeds it back to engineering and quality teams, which provides invaluable insights for new product development.



It won't be long before NOT having a Smart Services offering will represent a critical – and perhaps insurmountable – disadvantage for a product manufacturer.

## About nPhase, a QUALCOMM business

Founded in 1990, and now part of QUALCOMM, nPhase delivers solutions that enable product manufacturers and their service network partners to deliver differentiated value after the initial product sale, throughout the entire product life cycle.

How? Our end-to-end solutions capture asset performance data in real-time over wireless networks. Service, engineering, marketing, and sales organizations can leverage this data to improve asset uptime, reduce unplanned service calls, bolster service revenues and profitability, improve product quality, and retain more customers.

Here's what defines nPhase:

1. **Customer-focused:** Whether your company requires managed network services or complete end-to-end Smart Services solutions, we develop, deliver and manage solutions that are tailored to your unique business and technology requirements.
2. **Comprehensive:** From the field devices necessary to interface with your product, to the wireless or wireline communications, IT infrastructure, software applications, and integration work that's required with your back-end systems, nPhase handles all of the technology side so you can stay focused on the core competencies of your business.
3. **Experienced:** Our team has been tackling and solving the toughest challenges in product-service business models for nearly two decades.
4. **Global:** Our three data centers provide 24/7 support throughout the world's major regions.
5. **Wireless:** Backed by QUALCOMM's legacy of technology leadership, we support ALL forms of wireless and wireline transport protocols.
6. **Future-proof:** Our solutions anticipate and incorporate new technologies while maintaining continuity with their legacy solutions, removing the risk associated with changes in technology.

For more information about nPhase Smart Services solutions, visit [www.nphase.com](http://www.nphase.com).

**nPhase, a QUALCOMM business**

One North LaSalle Street  
Suite 2850  
Chicago, IL 60602  
Phone: (312) 357-1650  
Fax: (312) 357-1649  
email: [nphase@qualcomm.com](mailto:nphase@qualcomm.com)